

MULTI SDI MONITOR

LV 5330

LEADER**HD-SDI****SD-SDI****Dual Link 2K**
1920x1080 only**6.5 Inches****1.4 kg****CINELITE II**
INSIDE

Upon request

Multi SDI Monitor

The LV 5330 is a compact and lightweight multi-SDI test monitor specifically designed for on, camera and portable applications. Picture, waveform, vector, audio and status screens can be displayed individually or in multi-screen representations. The instrument is also equipped with on-picture measurement functions, Cinelite and Cinezone, and helps facilitate measurements that are easily understood by both technical and operations personnel. High-accuracy measurement and monitoring facilities also include settable error level monitoring and alarms as well as extensive data analysis. A screen capture function facilitates communication between production and post production personnel and aids in project documentation.

FEATURES

• Two Serial Digital Inputs and Output

Two SDI input connectors (channels A and B) support HD-SDI and SD-SDI signals. The selected SDI input is passed through an SDI output connector to facilitate switched monitor output operation.

• Display

A built-in 6.5-inch XGA TFT LCD (1,024x768) provides brilliant and clear representations of waveforms, vectors, pictures, audio level meters, status, etc. The multi-screen feature allows these displays to be shown simultaneously in tiled windows.

• Picture display

Brightness, contrast, and saturation is adjustable and aspect ratio, safe action and safe title markers can be displayed. The edge enhancement feature provides visual assistance with focus.

• Cinelite II (Cinelite and Cinezone)

The Cinelite on-picture measurement feature displays the luminance of any three user definable points and provides luminance measurements in %, RGB levels (or %) as well as in f-stops. The Cinezone feature uses false-colors to represent luminance values on the display enabling quick confirmation of the luminance distribution levels on the display.

• Waveform Monitoring

Parade, overlay, Y CB CR, RGB, and pseudo-composite displays are available.

• Vectorscope

Vectorscope display is available and accommodates both 75 % and 100 % saturation levels; pseudo-composite vectorscope display is also available.

• 5 Bar Display

The 5 Bar display enables simultaneous monitoring of component and composite gamut.

• Line Selector

Selects any line of the video signal to be displayed and provides waveform, vector and 5-bar representations of the selected line. A line marker on the picture facilitates visual selection of the appropriate line.

• Audio Level Meter

Up to 8 channels of embedded audio signals can be displayed using audio bar level meters.

*The SD-SDI audio quantization precision is up to 20 bits.

• Viewfinder

The camera's composite video output (in NTSC or PAL) can be shown on the picture display. The edge enhancement feature assists you in focusing the camera.

• Screen Capture

The displayed screen can be captured and saved to internal memory or USB memory.

• Extensive Analysis Features

- Various types of error detection
- SDI signal event log
- Digital data dump

• Flexible Control

- Instrument can be remote controlled from a PC over an Ethernet network.
- Internal memory holds up to 30 presets allowing quick access to your favorite instrument setups. Personalize your LV 5330 by loading your own custom presets via USB thumb-drive.

• External Synchronization

Accepts tri-level sync or NTSC/PAL black burst signals.

• Stereo Headphone Output

Extracts embedded audio signals and sends 2 user selectable audio channels to the headphone jack.

• Panel LED Illumination

You can illuminate all of the panel keys; a useful feature when working in a dark environment.

• Power Supply

XLR DC input connector is provided; accepts 12Vdc- 18Vdc.

A V-mount battery adapter is also available as a factory option.

• Tripod Mounting

A screw(1/4 in.) hole for attaching a camera tripod is provided on the bottom panel of the LV 5330

Battery Mount (Factory Option)

A battery adapter can be installed on the rear panel as a factory option.

- BATTERY MOUNT IDX (V-Mount)
- BATTERY MOUNT ANTON (AntonBauer)

LV 5330SER01 HISTOGRAM & USER GAMMA DISPLAY (Option)

This software option enables you to show video signals on the LV 5330 histogram display. It also enables you to convert the user-defined gamma to ITU-R BT709 gamma and show the converted signal on the LV 5330 picture display.

LV 5330SER02 GAMUT & LEVEL ERROR (Option)

This GAMUT & LEVEL ERROR option adds the following features to the LV 5330

- Area and time specification in gamut error detection
- Detection of luminance and chrominance signal level errors

Video Formats and Corresponding Standards Single Link System Video				
Color System	Quantization	Format		Corresponding Standard
		Scanning	Frame (Field) Rates	
Y, C _B , C _R 4:2:2	10 bit	1080i	60/59.94/50	SMPTE 274M
		1080p	30/29.97/25/24/23.98	SMPTE 292M
		1080PsF	30/29.97/25/24/23.98	SMPTE RP 211 SMPTE 292M
		720p	60/59.94/50/ 30/29.97/25/24/23.98	SMPTE 296M SMPTE 292M
		525i	59.94	
		625i	50	SMPTE 259M
Dual Link System Video				
Color System	Quantization	Format		Corresponding Standard
		Scanning	Frame (Field) Rates	
GBR 4:4:4	10 bit	1080i	60/59.94/50	SMPTE 372M (1920X1080)
		1080p	30/29.97/25/24/23.98	
		1080PsF	30/29.97/25/24/23.98	
Other Standards				
Ancillary Data Standard		SMPTE 291M		
Embedded Audio Standard		SMPTE 299M (HD-SDI), SMPTE 272M (SD-SDI)		
Format Setting		Auto or manual setting from the supported formats		
Format Setting		74.25 MHz (HDTV), 74.25/1.001 MHz (HDTV), 13.5 MHz (SDTV)		
Sampling Frequency		Auto setting from supported formats		
External Synchronization		Auto setting from supported formats		
Input/Output Connectors				
SDI Input		2 BNC connectors (switching between A and B)		
Input Connector		Tri-level sync or NTSC/PAL black burst		
External Reference Input		1 pair of BNC connectors (15 kΩ passive loop-through)		
Input Signal		*Phase difference accurate between external reference and internal signal is ±1 clock cycle.		
Input Connector				
SDI Output		1 BNC connector (reclocks and transmits the selected SDI input signal)		
Output Connector				
Headphone Output		Extracts and outputs the embedded audio signal. Supports 48 kHz (must be synchronized to the video signal)		
Output Signal		1 stereo miniature jack, 32 Ω (16 to 600 Ω)		
Sampling Frequency				
Output Connector				
USB Memory		Stores screen captures, error logs, preset data, and data dumps. Also used for Firmware update.		
Function		Recalls presets, transmits errors, controls the tally indicator D-sub 15-pin female		
Remote Control		Enables remote control from an external computer and data transmission		
Function		10BASE-T/100BASE-TX auto switching, one RJ-45 jack		
Ethernet				
Function				
Type				
Viewfinder Input		Monitors composite video signals, picture only.		
Function		NTSC/PAL VBS signal		
Input Signal		1 BNC connector		
Input Connector				
Picture Display				
HDTV Display		Displays by sampling pixels		
SDTV Display		Displays by interpolating pixels		
Display		Color or black and white selectable		
Marker Display		Center marker, aspect marker, safe title marker, safe action marker		
Color Temperature		3200 K, 6500 K, 9300 K or THROUGH		
Cinelite Display				
f-STOP		Measures relative brightness in f-stops		
Measurement points		Three points specified using the cursor		
Reference		Uses an object with an 18 % reflectance as reference		
%DISPLAY		Displays luminance percentage (LEVEL%), RGB percentage (RGB%), and RGB numeric values		
Measurement points		Three points specified using the cursor		
Measurement areas		1x1, 3x3, 9x9		
GAMMA		Reference gamma		
0.45		User-defined gamma		
USER 1-3		Gamma downloaded from USB memory		
USER A-E		Switches the screen to black and white and displays the set luminance level in green		
On Picture Level Indicator				
Cinezone Display				
Screen		Maps colors based on luminance levels. Linear or step selectable.		
UPPER		Can be set from -6.3 % to 109.4 %. Displays white when the level is above the set level.		
LOWER		Can be set from -7.3 % to 108.4 %. Displays Black when the level is below the set level.		
Display Form				
Display Size		6.5-inch color XGA. Effective area 1024 x 768 dots		
1 Screen Display		Picture display, Cinelite display, Cinezone display, waveform display, vectorscope display, status display,		

2 Screen Display	viewfinder display Picture and waveform displays, waveform and vectorscope displays, waveform and picture displays, waveform and audio level displays, audio numeric and bar displays
4 Screen Display	Audio level display or status display selectable in addition to waveform display, vectorscope display, and picture display
Waveform Display	Overlay and parade
Waveform Operation	Displays by calculating Y-C _B and Y-C _R
Display Modes	Uses bowtie signals (authorized by Tektronix, Inc.)
Timing Display	Show or hide selectable
EAV-SAV period	Converts Y, C _B , C _R signals into G, B, R and displays the result
GBR Conversion	Digitally converts component signals into composite signals and displays the result
Pseudo-Composite Display	
Vertical Axis	
Gain	x1, x5, or variable selectable
Variable Gain	x0.2 to x2.0 at the x1 setting, x1.0 to x10.0 at the x5 setting ≤ ±0.5 %
Amplitude Accuracy	
Horizontal Axis	
Line Magnification	x1, x10, x20, ACTIVE, or BLANK
Field Magnification	x1, x20, or x40 selectable
Cursor Measurement	% , mV, R%, 3FF or 1023
Amplitude Measurement	Measures in usec or msec
Time Measurement	Displays the frequency by assuming the interval between the cursors to be one period
Frequency Display	
Vectorscope Display	
Gain	x1, x5, IQ-MAG, or variable selectable
Variable Gain	x0.2 to x2.0
Amplitude Accuracy	≤ ±0.5 %
IQ Axis	Show or hide selectable
Display Colors	7 colors to choose from
Pseudo-Composite Display	Digitally converts component signals into composite signals and displays the result
5 Bar Display	
Bar Display	Displays the peak levels of Y, R, G, B, and composite
Phase Difference Display	
Display	Displays the phase difference between an SDI signal and the external sync signal both numerically and graphically
Embedded Audio Display	
Display Channels	8-channel simultaneous display
Meter	60 dB peak level or 90 dB peak level
Group Selection	Select any two groups from groups 1, 2, 3, and 4
Channel Mapping	Mapping to L, R, SL(S), SR, C, LFE, RL, RR
Viewfinder	
Display Size	Full-screen display
Status	
Data Dump Display	Dumps data by serial data sequence or by channel
Event log	Stores up to 1,000 events
Data output	To USB memory or over an Ethernet network
Error Detection	CRC Error, EDH Error, Gamut Error, Composite Gamut Error, BCH Errors
Screen Capture	Captures the displayed screen
Waveform Comparison	Superimposes the input signal over an image from memory.
Data Output	Screen captures can be saved as bitmap files to USB memory or to a PC over the Ethernet.
Data Input	Data Saved to USB memory can be loaded and displayed on the LV 5330
Presets	30
Other Display Features	
LCD	6.5-inch color LCD
Backlight brightness	High or low selectable
Screen Display	Format, color system, date, time
Panel LED Illumination	Illuminates all keys
Environmental Conditions	
Operating Temperature	0 to 40 °C
Operating Humidity Range	≤ 85 %RH (no condensation)
Operating Environment	Indoors, or outdoors with no rain
Overvoltage Category	1
Pollution Degree	2
Power Requirements	12 VDC (10 to 18 V), 18 Wmax.
Dimensions and Weight	215 (W) x128 (H) x 63 (D) mm (excluding projections), 1.4 kg 8 1/2 (W) x 5 3/64 (H) x 2 31/64(D) Inch, 2.9 lbs.
Accessories	Instruction manual1 15-pin D-sub connector1 15-pin D-sub connector1 VESAs spacer1 Ferrite core1
Option Sold Separately	AC adapter SPU40-105 Rackmount Adapter LR 2752 Blank Panel LC 2130 Tripod Mounting Plate LC 2127

OPTION

LV 5330SER01 HISTOGRAM & USER GAMMA DISPLAY (Option)

This software option enables you to show video signals on the LV 5330 histogram display. It also enables you to convert the user-defined gamma to ITU-R BT709 gamma and show the converted signal on the LV 5330 picture display.

Histogram Display Display Modes YGBR, YRGB Y1023 Error Display Error Display Colors Y GBR Histogram Brightness Scale Brightness Scale Unit Scale Color	YGBR, YRGB, Y1023 8-bit data processing 10-bit data processing Values that are less than 0 % or greater than or equal to 100.1 % are displayed as errors. Red Yellow -128 to 127 -8 to 7 %, 3FF, 1023 White, yellow, cyan, green, magenta, red, blue
Picture Display with User-Defined Gamma User-Defined Gamma	Acquired with CAL in the CINELITE display. Selected with GAMMA (USER-A, USER-B, USER-C, USER-D, USER-E).
General Specifications Environmental Conditions Contents	Same as the LV 5330 License key1 Instruction manual1



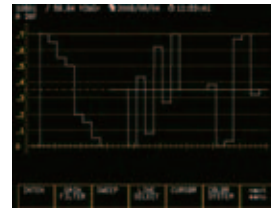

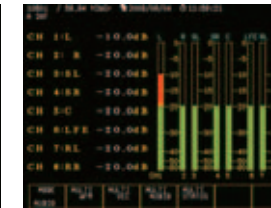
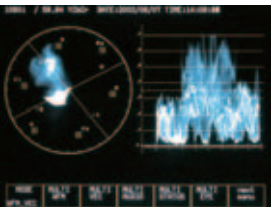

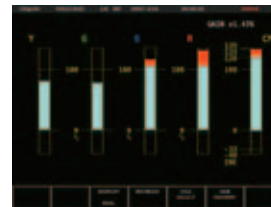


LV 5330SER02 GAMUT & LEVEL ERROR (Option)

This GAMUT & LEVEL ERROR option adds the following features to the LV 5330

- Area and time specification in gamut error detection
- Detection of luminance and chrominance signal level errors

Gamut Error Error Detection Area Specification Time Specification	Detect by specifying area and time 0.0 to 5.0 % (specifying 0.0 % is equivalent to not specifying an area) 1 to 50 consecutive frames
Level Error Error Detection Detection Level Luminance Signal Chrominance Signal	Level errors in the luminance and chrominance signals are detected (not available in dual link mode) -7.2 to 109.4 %, -50.4 to 765.8 mV (for both upper and lower limits) -57.0 to 57.0 %, -399.0 to 399.0 mV (for both upper and lower limits)
General Specifications Environmental Conditions Contents	Same as the LV 5330 License key1 Instruction manual1

LV 5330 DISPLAY

Cinelite 	Cinezone 	Waveforms 	Vector 	Audio Display 
Multi-Screen Display 	5 Bar/Gamut 	Picture/Waveform 	Waveform/Picture 	Phase Difference Display 

LV 5330 REAR PANEL



Camera Mounting



Rack Mounting



LR 2752
LV 5330 dual mount example